

L1 ANSWER 7 OF 13 CA COPYRIGHT 2002 ACS
 AN 128:92152 CA
 TI Pozzolanic fillers for manufacturing hydraulic binders and concrete, and their use
 IN Bid aux, Alain
 PA Holderbank Financiere Glarus AG, Switz.
 SO Patentschrift (Switz.), 4 pp.
 CODEN: SWXXAS

DT Patent

LA French

IC ICM C04B014-00

ICS C04B028-00; C04B007-00

CC 58-1 (Cement, Concrete, and Related Building Materials)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	CH 688550	A	19971114	CH 1994-1453	19940510
AB	The fillers contain ground glass, esp. SiO ₂ (95 wt.% <40 and av. particle size <12 .mu.m; sp. surface area >5000 cm ² /g). In the manuf. of portland cement, the ingredients are mixed before crushing and crushed together, or sep. crushed and then mixed, or may be mixed with the constituents of the concrete to be prepd.				
ST	ground glass pozzolanic filler cement; vitreous silica pozzolanic filler; portland cement pozzolanic filler; concrete pozzolanic filler				
IT	Concrete (compns. contg. glass powder as pozzolanic filler for manuf. of)				
IT	Pozzolans RL: MOA (Modifier or additive use); TEM (Technical or engineered material use); USES (Uses) (ground glass, fillers; in portland cement and concrete manuf.)				
IT	Cement (construction material) (portland; compns. contg. glass powder as pozzolanic filler for manuf. of)				
IT	Glass powders RL: TEM (Technical or engineered material use); USES (Uses) (pozzolanic filler; in portland cement and concrete manuf.)				
IT	Fillers (pozzolanic, glass powder; in portland cement				

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L1 ANSWER 6 OF 13 CA COPYRIGHT 2002 ACS
 AN 131:148131 CA
 TI Use of ground waste glass and Normal portland cement mixtures for
 improving slurry and paste backfill support performance
 AU Archibald, J. F.; Chew, J. L.; Lausch, P.
 CS Department of Mining Engineering, Queen's University, Kingston, ON, Can.
 SO CIM Bulletin (1999), 92(1030), 74-80
 CODEN: CIBUBA; ISSN: 0317-0926
 PB Canadian Institute of Mining, Metallurgy and Petroleum
 DT Journal
 LA English
 CC 58-3 (Cement, Concrete, and Related Building Materials)
 Section cross-reference(s): 60
 AB Research has demonstrated that finely ground industrial and municipal
 container waste glass can be utilized as an effective partial pozzolanic
replacement for Normal Portland cement (NPC) in various types of mine
 backfill at significant potential cost savings. Information is presented
 that summarizes comparative strength behavior of a variety of mine
 backfill products, from different mine sites, when manufd. in the forms of
 hydraulic slurry and paste backfill media. Strength comparison has been
 conducted for a range of NPC and ground waste glass-consolidated slurry
 and paste backfill products, with intercomparison also being made vs. 100%
 NPC-consolidated products as control std. materials. For slurry and paste
 backfill mixts., up to 35% of the Portland cement binder was replaced by
 ground waste glass material with excellent strength characteristics being
 developed. Ground waste glass has been shown to be capable of providing
 equiv. or better backfill strength characteristics with respect to Normal
 Portland cement in the long term, over cure intervals up to 224 days, and
 at potential cost savings of up to 50% being projected. The results of
 parametric studies to explore the sensitivity of ground waste
glass pozzolans to variations in mixt. moisture content,
 tailings mineralogy, pozzolan size distribution, cure temp. and glass type
 are also presented. Consideration of the competitiveness of ground waste
 glass as a partial replacement for NPC and other commonly-utilized mine
 pozzolan materials is based upon assessment of material grindability and
 other economic factors.
 ST waste glass utilization mine backfill
 IT Solid wastes
 (glass; use of ground waste glass and Normal p

L1 ANSWER 5 OF 13 CA COPYRIGHT 2002 ACS
AN 132:283140 CA
TI Studies on concrete containing ground waste glass
AU Shao, Y.; Lefort, T.; Moras, S.; Rodriguez, D.
CS Department of Civil Engineering and Applied Mechanics, McGill University,
Montreal, QC, Can.
SO Cement and Concrete Research (2000), 30(1), 91-100
CODEN: CENRAI; ISSN: 0008-8846
PB Elsevier Science Ltd.
DT Journal
LA English
CC 58-2 (Cement, Concrete, and Related Building Materials)
Section cross-reference(s): 60
AB The possibility of using finely ground waste glass as part replacement for
cement in concrete was examd. through three sets of tests: the lime-glass
tests to assess the pozzolanic activity of ground glass, the compressive
strength tests of concrete having 30% cement replaced by ground glass to
monitor the strength development, and the mortar bar tests to study the
potential expansion. The results showed that ground glass having a
particle size finer than 38 .mu.m did exhibit a pozzolanic behavior. The
compressive strength from lime-glass tests exceeded a threshold value of
4.1 MPa. The strength activity index was 91, 84, 96, and 108% at 3, 7,
28, and 90 days, resp., exceeding 75% at all ages. The mortar bar tests
demonstrated that the finely ground glass helped reduce the expansion by
up to 50%. A size effect was obsd.; a smaller glass particle size led to
a higher reactivity with lime, a higher compressive strength in concrete,
and a lower expansion. Compared to fly ash concrete, concrete contg.
ground glass exhibited a higher strength at both early and late ages.
ST concrete ground waste glass pozzolanic activity
strength development
IT Expansion